INSTYTUT TECHNIKI BUDOWLANEJ

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

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European Technical Assessment

ETA-23/1029 of 22/10/2025

General Part

Technical Assessment Body issuing the European Technical Assessment	Instytut Techniki Budowlanej
Trade name of the construction product	JCP Drop In Anchor DBM / DBMSH
Product family to which the construction product belongs	Deformation-controlled expansion fasteners for use in concrete for redundant non-structural systems
Manufacturer	Hexstone Ltd Trading as JCP Construction Products Opal Way, Stone Business Park, Stone, Staffordshire, ST15 0SW Great Britain
Manufacturing plant	Hexstone plants
This European Technical Assessment contains	15 pages including 3 Annexes which form an integral part of this Assessment
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document (EAD) 330747-00-0601 “Fasteners for use in concrete for redundant non-structural systems”
This version replaces	ETA-23/1029 issued on 08/02/2024

Specific Part

1 Technical description of the product

JCP Drop In Anchor DBM / DBMSH are deformation-controlled expansion fasteners, made of carbon steel.

The fastener is installed in a drilled hole and anchored by deformation-controlled expansion.

The products description is given in Annex A.

2 Specification of the intended use in accordance with the applicable European Assessment Document (EAD)

The performances given in clause 3 are only valid if the fastener is used in compliance with the specifications and conditions given in Annex B.

The provisions made in this European Technical Assessment are based on an assumed working life of the fastener of 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer or Technical Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Performance of the product

3.1.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Resistance to fire	Annex C3

3.1.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance for all load directions	Annex C1 and C2
Durability	Annex A3 and B1

3.2 Methods used for the assessment

The assessment has been made in accordance with EAD 330747-00-0601.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

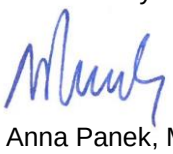
According to Decision 97/161/EC of the European Commission the system 2+ of assessment and verification of constancy of performance applies (see Annex V to regulation (EU) No 305/2011).

5 Technical details necessary for the implementation of the AVCP system, as provided in the applicable European Assessment Document (EAD)

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited in Instytut Techniki Budowlanej.

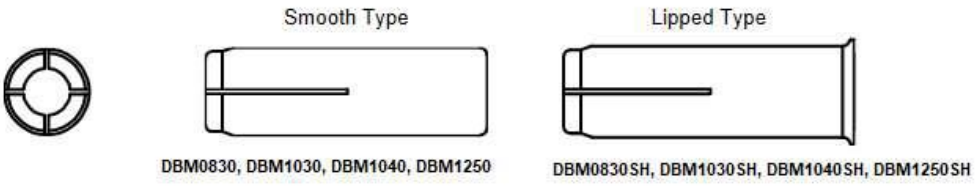
For type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

Issued in Warsaw on 22/10/2025 by Instytut Techniki Budowlanej



Anna Panek, MSc

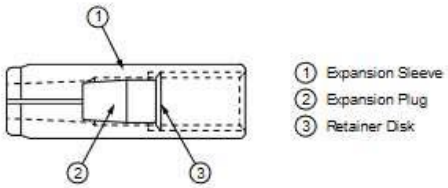
Deputy Director of ITB



Marking on the body

DBM - anchor identification and type

XX – size



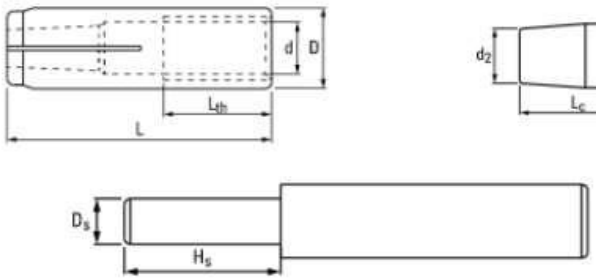


Table A1. Dimensions (1)

Fastener			**DBM0830 DBM0830SH**	**DBM1030 DBM1030SH**	**DBM1040 DBM1040SH**	**DBM1250 DBM1250SH**
Size			**M8x30**	**M10x30**	**M10x40**	**M12x50**
Expansion sleeve						
Sleeve diameter	D	[mm]	10	12	12	16
Sleeve length	L	[mm]	30	30	40	50
Thread	d	[-]	M8	M10	M10	M12
Thread length	L_{th}	[mm]	13	13	19	22
Expansion plug						
Plug diameter	d_1	[mm]	6,50	8,00	8,10	10,15
	d_2	[mm]	5,55	6,93	6,50	8,50
Plug length	L_c	[mm]	12,00	11,10	15,25	20,00

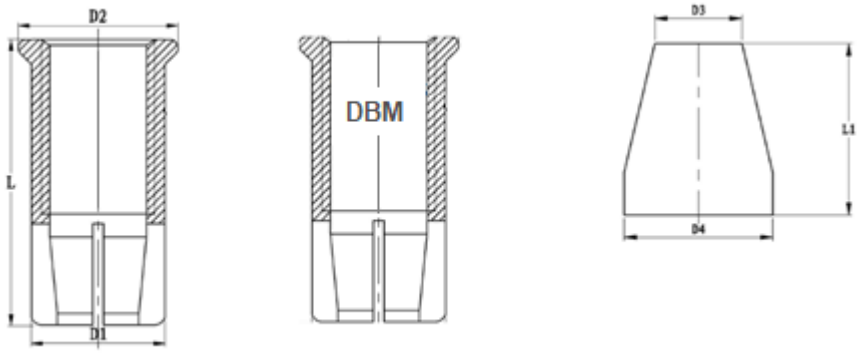


Table A2. Dimensions (2)

Fastener			**DBM0825SH**	**DBM1025SH**	**DBM1225SH**
Size			**M8x25**	**M10x25**	**M12x25**
Expansion sleeve					
Sleeve diameter	D1	[mm]	9,90 - 10,00	11,90 - 12,00	14,90 - 15,00
	D2	[mm]	11,90 ± 0,2	13,90 ± 0,2	17,00 ± 0,2
Sleeve length	L	[mm]	24,80 - 25,30	24,80 - 25,30	24,80 - 25,30
Thread	-	[-]	M8	M10	M12
Expansion plug					
Plug diameter	D3	[mm]	5,10 ± 0,1	7,00 ± 0,1	8,00 ± 0,1
	D4	[mm]	6,30 ± 0,1	8,00 ± 0,1	9,80 ± 0,1
Plug length	L1	[mm]	8,00 ± 0,5	8,00 ± 0,5	8,00 ± 0,5

Table A3. Materials

Element	Material		
Expansion sleeve	Carbon steel	$f_{uk} \geq 325$ MPa $f_{yk} \geq 185$ MPa	Electroplated zinc coating ≥ 5 µm according to EN ISO 4042
Expansion plug		$f_{uk} \geq 315$ MPa $f_{yk} \geq 195$ MPa	

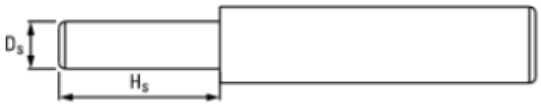


Table A4. Dimensions of installation pins (1)

Fastener			DBM0830 DBM0830SH	DBM1030 DBM1030SH	DBM1040 DBM1040SH	DBM1250 DBM1250SH
Size			**M8x30**	**M10x30**	**M10x40**	**M12x50**
Setting pin diameter	D_s	[mm]	6,50	8,00	8,00	10,20
Setting pin length	H_s	[mm]	18,00	18,00	24,00	30,00

Table A5. Dimensions of installation pins (2)

Fastener			DBM0825SH	DBM1025SH	DBM1225SH
Size			**M8x25**	**M10x25**	**M12x25**
Setting pin diameter	D_s	[mm]	6,40	8,20	10,00
Setting pin length	H_s	[mm]	15,00	16,00	10,40

Specification of intended use

Anchorages subject to:
- Multiple use for non-structural application.
- Static and quasi-static loads.
- Anchorages with requirements related to resistance to fire.

Base material:
- Reinforced or unreinforced normal weight concrete (without fibres) of strength class C20/25 to C50/60 according to EN 206.
- Uncracked and cracked concrete.
- Pre-stressed hollow core concrete slabs of strength class C30/37 to C50/60: DBM0825SH, DBM1025SH, DBM1225SH fasteners only.

Use conditions (environmental conditions):
- Anchorages subject to dry internal conditions.

Design:
- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be transmitted. The position of the fastener is indicated on the design drawings (e.g. position of the fastener relative to reinforcement or to supports, etc.).
- Anchorages under static and quasi-static loads and under fire exposure are designed in accordance with EN 1992-4:2018.
- Fasteners are only to be used for multiple use for non-structural applications according to EAD 330747-00-0601.

Installation:
- Fastener installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Use of the fastener only as supplied by the manufacturer without exchanging any component of the fastener.
- Fastener installation in accordance with the manufacturer's specifications and drawings and using the appropriate tools.
- Check of concrete being well compacted, e.g. without significant voids.
- Positioning of the drill holes without damaging the reinforcement.
- In case of aborted hole: new drilling at a minimum distance away of twice the depth of the aborted hole or smaller distance if the aborted drill hole is filled with high strength mortar and if under shear or oblique tension load it is not in the direction of load application.
- Fastener installation such that the effective anchorage depth is complied with.

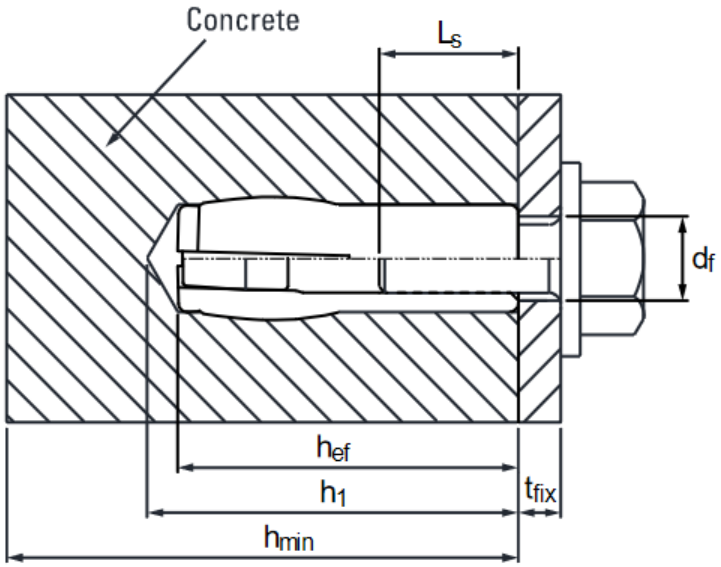


Table B1.1 Installation parameters in concrete (1)

Fastener			DBM0825SH	DBM1025SH	DBM1225SH
Size			**M8x25**	**M10x25**	**M12x25**
Effective anchorage depth	h_{ef}	[mm]	25	25	25
Drill hole depth	h_1	[mm]	27	27	27
Drill hole diameter	d_0	[mm]	10	12	15
Maximum installation torque	T_{inst}	[Nm]	11	17	38
Minimum thickness of concrete member	h_{min}	[mm]	80	80	80
Minimum screwing depth	$L_{s,min}$	[mm]	7	8	10
Maximum screwing depth	$L_{s,max}$	[mm]	12	13	13
Diameter of clearance hole in the fixture	d_f	[mm]	8	10	12
Minimum spacing	s_{min}	[mm]	200	200	200
Minimum edge distance	c_{min}	[mm]	150	150	150

Table B1.2 Installation parameters in concrete (2)

Fastener			DBM0830 DBM0830SH	DBM1030 DBM1030SH	DBM1040 DBM1040SH	DBM1250 DBM1250SH
Size			**M8x30**	**M10x30**	**M10x40**	**M12x50**
Effective anchorage depth	h_{ef}	[mm]	30	30	40	50
Drill hole depth	h_1	[mm]	33	33	43	54
Drill hole diameter	d_0	[mm]	10	12	12	16
Maximum installation torque	T_{inst}	[Nm]	11	17	17	38
Minimum thickness of concrete member	h_{min}	[mm]	80	80	80	100
Minimum screwing depth	$L_{s,min}$	[mm]	8	10	10	12
Maximum screwing depth	$L_{s,max}$	[mm]	13	13	19	22
Diameter of clearance hole in the fixture	d_f	[mm]	9	12	12	14
Minimum spacing	s_{min}	[mm]	200	200	200	250
Minimum edge distance	c_{min}	[mm]	150	150	150	150

Fastening screws or threaded rods:
Steel, property class 4.8 / 5.8 / 6.8 / 8.8 according to EN-ISO 898-1; thickness of zinc coating ≥ 5 µm

JCP Drop In Anchor DBM / DBMSH	**Annex B2** of European Technical Assessment ETA-23/1029
Intended use Installation parameters in concrete	

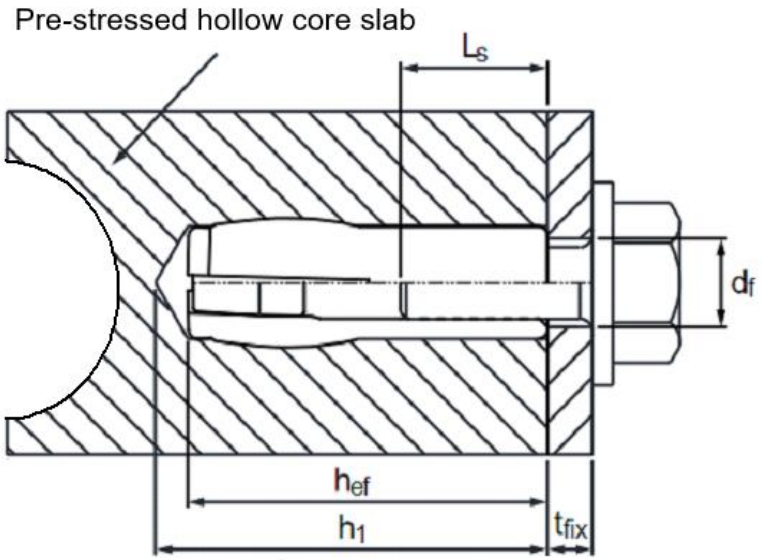
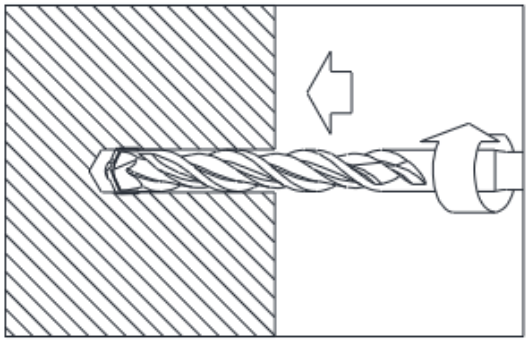


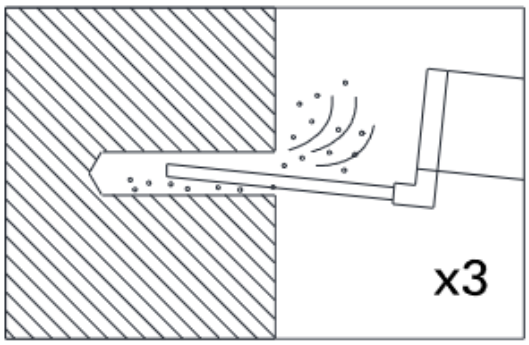
Table B2. Installation parameters in pre-stressed hollow core slab

Fastener			**DBM0825SH**	**DBM1025SH**	**DBM1225SH**
Size			**M8x25**	**M10x25**	**M12x25**
Effective anchorage depth	$h_{ef} = h_{nom}$	[mm]	25	25	25
Drill hole depth	h_1	[mm]	27	27	27
Drill hole diameter	d_0	[mm]	10	12	15
Maximum installation torque	T_{inst}	[Nm]	11	17	38
Minimum screwing depth	$L_{s,min}$	[mm]	7	8	10
Maximum screwing depth	$L_{s,max}$	[mm]	12	13	13
Diameter of clearance hole in the fixture	d_f	[mm]	8	10	12
Minimum spacing	s_{min}	[mm]	200	200	200
Minimum edge distance	c_{min}	[mm]	150	150	150

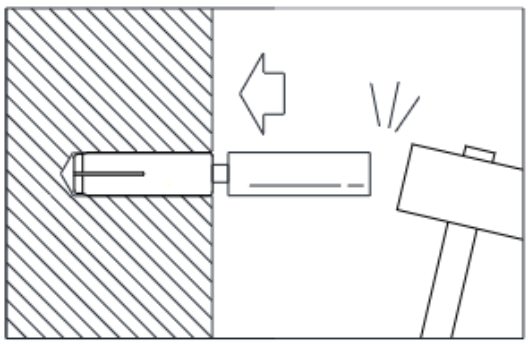
Fastening screws or threaded rods:
Steel, property class 4.8 / 5.8 / 6.8 / 8.8 according to EN-ISO 898-1; thickness of zinc coating ≥ 5 µm



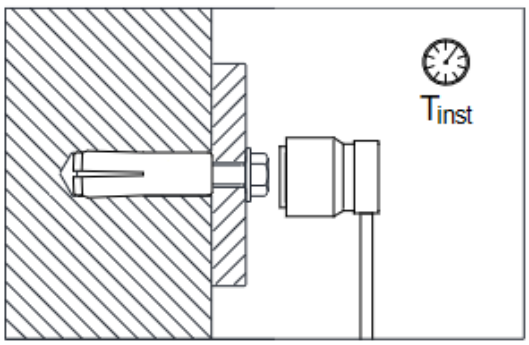
Drill hole with metal hammer drill machine.
Drill to a required depth.



Blow out dust at least 3 times with a hand pump.

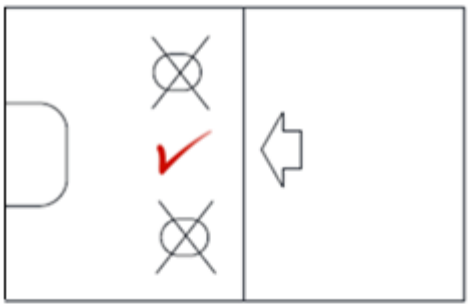


Put the fastener into the drill hole, hammering with the installation tool (pin), until the setting pin fully insert into the fastener.

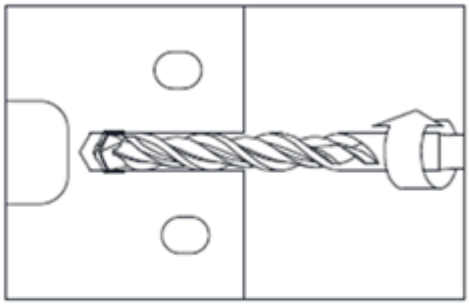


Fix the fixture by screw or threaded rod with max. T_{inst}.

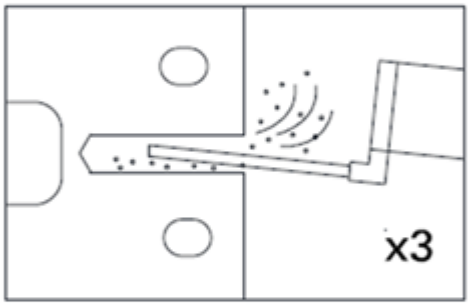
JCP Drop In Anchor DBM / DBMSH	**Annex B4** of European Technical Assessment ETA-23/1029
Intended use Installation instructions and tools in concrete	



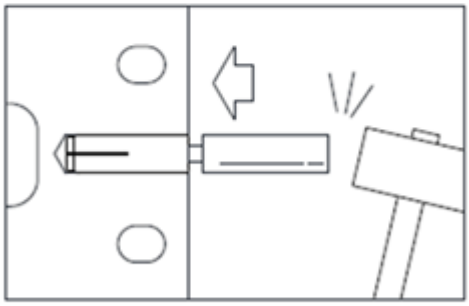
Find admissible fastener position before drilling.



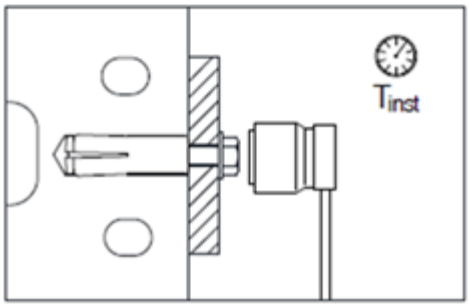
Drill hole with rotary percussive machine.
Drill to a required depth.



Blow out dust at least 3 times with a hand pump.



Put the fastener into the drill hole, hammering with the installation tool (pin), until the setting pin fully insert into the fastener.



Fix the fixture by screw or threaded rod with max. T_{inst}.

JCP Drop In Anchor DBM / DBMSH	**Annex B5** of European Technical Assessment ETA-23/1029
Intended use Installation instructions and tools in pre-stressed hollow core slab	

Table C1.1: Characteristic resistance in concrete C20/25 to C50/60

Fastener			DBM0825SH	DBM1025SH	DBM1225SH
Size			**M8x25**	**M10x25**	**M12x25**
All load directions (fastening screw or threaded rod property class ≥ 4.8)					
Characteristic resistance in concrete C20/25 to C50/60	F^0_{Rk}	[kN]	2,5	4,0	4,0
Installation safety factor	γ_{inst}	[-]	1,0	1,0	1,0
Partial safety factor	γ_M 1)	[-]	1,5	1,5	1,5
Spacing	s_{cr}	[mm]	200	200	200
Edge distance	c_{cr}	[mm]	150	150	150
Minimum member thickness	h_{min}	[mm]	80	80	80
Shear load: steel failure with lever arm					
Characteristic bending moment: property class 4.8	$M^0_{Rk,s}$	[Nm]	15,0	29,9	52,4
Partial safety factor	γ_{Ms} 1)	[-]	1,25	1,25	1,25
Characteristic bending moment: property class 5.8	$M^0_{Rk,s}$	[Nm]	19,0	37,0	65,6
Partial safety factor	γ_{Ms} 1)	[-]	1,25	1,25	1,25
Characteristic bending moment: property class 6.8	$M^0_{Rk,s}$	[Nm]	22,5	44,9	78,7
Partial safety factor	γ_{Ms} 1)	[-]	1,25	1,25	1,25
Characteristic bending moment: property class 8.8	$M^0_{Rk,s}$	[Nm]	30,0	59,9	104,9
Partial safety factor	γ_{Ms} 1)	[-]	1,25	1,25	1,25
1) in the absence of other national regulation					

Table C1.2: Characteristic resistance in concrete C20/25 to C50/60

Fastener			DBM0830 DBM0830SH	DBM1030 DBM1030SH	DBM1040 DBM1040SH	DBM1250 DBM1250SH
Size			**M8x30**	**M10x30**	**M10x40**	**M12x50**
All load directions (fastening screw or threaded rod property class ≥ 4.8)						
Characteristic resistance in concrete C20/25 to C50/60	F^0_{Rk}	[kN]	4,0	4,5	4,5	7,0
Installation safety factor	γ_{inst}	[-]	1,4	1,4	1,2	1,2
Partial safety factor	γ_M 1)	[-]	1,5	1,5	1,5	1,5
Spacing	s_{cr}	[mm]	200	200	200	250
Edge distance	c_{cr}	[mm]	150	150	150	150
Minimum member thickness	h_{min}	[mm]	80	80	80	100
Shear load: steel failure with lever arm						
Characteristic bending moment: property class 4.8	$M^0_{Rk,s}$	[Nm]	15,0	30,0	30,0	52,4
Partial safety factor	γ_{Ms} 1)	[-]	1,25	1,25	1,25	1,25
Characteristic bending moment: property class 5.8	$M^0_{Rk,s}$	[Nm]	19,0	37,0	37,0	65,6
Partial safety factor	γ_{Ms} 1)	[-]	1,25	1,25	1,25	1,25
Characteristic bending moment: property class 6.8	$M^0_{Rk,s}$	[Nm]	23,0	45,0	45,0	78,7
Partial safety factor	γ_{Ms} 1)	[-]	1,25	1,25	1,25	1,25
Characteristic bending moment: property class 8.8	$M^0_{Rk,s}$	[Nm]	30,0	60,0	60,0	104,9
Partial safety factor	γ_{Ms} 1)	[-]	1,25	1,25	1,25	1,25
1) in the absence of other national regulation						

Table C2: Characteristic resistance in pre-stressed hollow core slab C30/37 to C50/60

Fastener			DBM0825SH	DBM1025SH	DBM1225SH
Size			**M8x25**	**M10x25**	**M12x25**
All load directions (fastening screw or threaded rod property class ≥ 4.8)					
Bottom flange thickness	d_b	mm	≥ 35	≥ 35	≥ 35
Characteristic resistance in pre-stressed hollow core slab C30/37 to C50/60	F^0_{Rk}	[kN]	6,0	6,5	7,0
Installation safety factor	γ_{inst}	[-]	1,0	1,0	1,0
Partial safety factor	γ_M [1)]	[-]	1,25	1,25	1,25
Spacing	s_{cr}	[mm]	200	200	250
Edge distance	c_{cr}	[mm]	150	150	150
Minimum member thickness	h_{min}	[mm]	35	35	35
Shear load: steel failure with lever arm					
Characteristic bending moment: property class 4.8	$M^0_{Rk,s}$	[Nm]	15,0	29,9	52,4
Partial safety factor	γ_{Ms} [1)]	[-]	1,25	1,25	1,25
Characteristic bending moment: property class 5.8	$M^0_{Rk,s}$	[Nm]	18,8	37,4	65,6
Partial safety factor	γ_{Ms} [1)]	[-]	1,25	1,25	1,25
Characteristic bending moment: property class 6.8	$M^0_{Rk,s}$	[Nm]	22,5	44,9	78,7
Partial safety factor	γ_{Ms} [1)]	[-]	1,25	1,25	1,25
Characteristic bending moment: property class 8.8	$M^0_{Rk,s}$	[Nm]	30,0	59,9	104,9
Partial safety factor	γ_{Ms} [1)]	[-]	1,25	1,25	1,25

[1)] in the absence of other national regulation

Table C3: Characteristic resistance under fire exposure in concrete C20/25 to C50/60

Fastener			DBM0830 DBM0830SH	DBM1030 DBM1030SH	DBM1040 DBM1040SH	DBM1250 DBM1250SH
Size			**M8x30**	**M10x30**	**M10x40**	**M12x50**
Fire resistance class (fastening screw or threaded rod property class ≥ 4.8)						
R30	Characteristic resistance $F^0_{Rk,fi}$ [1)]	[kN]	0,89	0,89	1,13	1,75
R60		[kN]	0,89	0,89	1,13	1,75
R90		[kN]	0,89	0,89	1,13	1,75
R120		[kN]	0,71	0,71	0,90	1,40
Spacing	$s_{cr,fi}$	[mm]	4 x h_{ef}			
Edge distance	$c_{cr,fi}$	[mm]	2 x h_{ef}			

The design method covers fasteners with a fire attack from one side only. In case of fire attack from more than one side, the edge distance shall be ≥ 300 mm.

[1)] in the absence of other national regulation a partial safety factor $\gamma_{M,fi}$ = 1,0 is recommended